(b) and (c) Minerals are categorized on the basis of their resource position *vis-a-vis* annual consumption such as scarce, deficient, adequate and abundant. The identification of substitutes/alternatives of scarce/ deficient minerals is beyond the purview of GSI.

The details of some of the scarce and deficient minerals estimated by GSI is as under:

(Resource in million tonnes unless otherwise stated)

Ore/Mineral	Resource established upto F.S. 2004-05
Copper ore	518.04
Lead-Zinc ore	532.05
Gold Ore	99.233
Platinum Group (PGE) ore	14.2
Cesium bearing Pegmatite	0.109
Molybdenum ore	5.62
Tungsten ore	53.68*
Tin	65,699 (Tonnes metal)*

*Resource position as on 2000

(d) Question does not arise.

Upgradation of marine and air-borne survey wings

2023. SHRI RAJKUMAR DHOOT: Will the Minister of MINES be pleased to state:

(a) whether it is a fact that Geological Survey of India has upgraded its marine and air-borne survey wings;

(b) if so, the details thereof; and

(c) the important achievements of these wings so far and the details of work to be done by upgraded wings in two years?

THE MINISTER OF STATE IN THE MINISTRY OF MINES (DR. T. SUBBARAMI REDDY): (a) and (b) Yes, Sir. Geological Survey of India has upgraded its Airborne Mineral Survey & Exploration [AMSE] Wing

through airborne survey instrumentation packages in the year 2000 by acquiring PDAS-1000 Data Acquisition and Recording sytem, Gama Ray Spectrometer, Airborne Cesium Magnetometer, Colour Video-path Recording and Recovery System, 24 Channel GPS & Composite GPS and Magnetometer sub-system, Geophysical Mapping Centre, etc. to keep pace with the emerging advancements in the airborne survey. GSI [AMSE Wing] is being further upgraded with the acquisition of a Heliborne Geophysical System with four geophysical sensors.

GSI Marine Wing has upgraded its equipment systems with installation of digital Echosounder 'Bathy-2000' and Cesium-vapour Magnetometer in the ocean going vessel. Upgradation of coastal launches has also been taken up by adding Digital Echosounder 'Bathy 1500', DGPS systems and Side-scan Sonar. GSI Marine Wing is being upgraded by acquiring ocean going vessel and Geotechnical vessel with shallow drilling capacity.

(c) The following are the major achievements of the AMSE Wing and Marine Wings so far —

AMSE Wing has surveyed in the States of Andhra Pradesh, Madhya Pradesh, Orissa, Maharashtra, Rajasthan, Bihar, West Bengal and Karnataka for delineating favorable locales and structural features for lead, zinc, copper, gold and nickel mineralization; diamond bearing kimberlite clan rocks and favorable structures to aid in oil exploration in different states.

Marine Wing of GSI has carried out systematic sea bed survey including preparation of geological, geochemical and geophysical maps of sea bed within Exclusive Economic Zone; evaluation of heavy mineral placers and lime mud in territorial waters of the country and geotechnical investigations for development of ports, harbours pipelines etc.

During the next two years the major programes of the two wings would be as follows —

(i) GSI AMSE Wing proposes to identify the ideal structural setups and locales of occurrences of Gondwana horizons in Maharashtra; potential basemetals, gold and iron-ore in Madhya Pradesh and Chhattisgarh. The proposed heliborne geophysical survey system will be used in detecting shallow level concealed geological bodies of relevance.

(ii) GSI, Marine Wing proposes to carry out close grid seabed mapping along with swath bathymetery, multichannel seismic survey and

deep sampling, seabed mapping by geological geophysical and geochemical survey in EEZ and beyond EEZ areas, investigations on Barren Islands and geotechnical investigation for ports and harbours.

Quantum of Bauxite in Chhattisgarh

†2024. SHRI DILIP SINGH JUDEV: Will the Minister of MINES be pleased to state:

(a) the quantum of bauxite assessed in Chhattisgarh;

(b) the quantum of bauxite assessed in different areas of the State alongwith the names of these areas;

(c) the quantum of consumption and requirement of bauxite for the industries situated in the State and the quantum demanded to be sent outside the State;

(d) the quantum of bauxite for mining of which lease has been demanded by the Chhattisgarh Mineral Development Ltd., Ambikapur alongwith the purpose thereof; and

(e) the details of the permission given to this company for bauxite mining by the Central and State Governments?

THE MINISTER OF STATE IN THE MINISTRY OF MINES (DR. T. SUBBARAMI REDDY): (a) and (b) As per available information, the total resources of bauxite in the Chhattisgarh are placed at 149.6 million tonnes. The district-wise resources of bauxite in Chhattisgarh are given below:

('000 tonnes)

District	Total Resources
Bastar	982.13
Bilaspur	4411.5
Dantewara	483
Jashpur	8257.45
Kanker	47066
Kawaradha	7857
Korba	1385.9
Raigarh	3949.86
Surguja	68099.83
Kabirdham	7110

† Original notice of the question was received in Hindi.